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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,349	01/31/2004	Jiansheng Tang	9257 USA-NONP	8362

7590 03/08/2007
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EXAMINER

EGWIM, KELECHI CHIDI

ART UNIT	PAPER NUMBER
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1713

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/769,349

Applicant(s)

TANG ET AL.

Examiner

Dr. Kelechi C. Egwim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,18,20,21,25,26 and 29 is/are pending in the application.
- 4a) Of the above claim(s) 49-56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,18,20,21,25,26 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/13/2006 has been entered.

Election/Restrictions

2. Newly submitted claims 49-56 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The claims are to particles with "essential" components which are not "essential" as defined in the originally presented and claimed invention. The search for the new composition would require a search for different essential components from the originally presented claims.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 49-56 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 2, 18, 20, 21, 25, 26 and 29 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over Kitani, for reason cited in the previous action.

5. Claims 1, 2, 18, 20, 21, 25, 26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al. (JP 60203648) independently in combination with either of Matsui et al. (JP 60203647) or Ikeda et al. (JP 04057837).

For the middle of page 3 to the end of page 4 of the translation and the abstract, Matsui et al. ('648) teach expandable polystyrene particles impregnated with a blowing (expanding) agent, for forming foam articles in a molding process, coated with a coating composition comprising 0.005 to 100 parts by weight, based on 100 parts by weight of the polystyrene polymer, of polyethylene glycol having an average molecular weight ranging from about 100 about 1000, and 0.01-2 wt% of surface modifiers selected from a group comprising polyethylene wax and higher carboxylic acid metal salts.

While Matsui et al. do not exemplify the combination of polyethylene wax and higher carboxylic acid metal salts as surface modifiers, both the polyethylene wax and higher carboxylic acid metal salts are taught as surface modifiers in Matsui et al. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention

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was made to use a combination of polyethylene wax and higher carboxylic acid metal salts as surface modifiers in the surface coating composition for the particles, since each member of the combination is known individually as surface modifiers and a person of ordinary skill in the art at the time the invention was made would have expected such a combination to work in an additive or cumulative manner, In re Kerkhoven, 205 USPQ 1069 (CCPA 1980)

Further, it is well known in the art to incorporate both polyethylene wax and fatty acid metal salt into coating composition for expandable polystyrene particles, for the purpose of preventing blocking of the resin granules at the time of pre-foaming and reducing the cooling time at the time of foaming and moulding, such as taught by Matsui et al. ('47--see abstract) and to providing improved fusion among the expanded particles while having improved resistance to leakage in the moulded products, such as taught by Ikeda et al. (see abstract)

In the abstract, each of Matsui et al. ('47) and Ikeda et al., independently, teach expandable polystyrene particles impregnated with a blowing (expanding) agent, for forming foam articles in a molding process, coated with a coating composition comprising polyethylene wax (MW's up about 900) and a metal salt of higher fatty acids.

Therefore, it would further have been obvious to one having ordinary skill in the art at the time the invention was made, to incorporate the combination of polyethylene wax and a metal salt of higher fatty acids in the pre-mold expandable polystyrene particles of Matsui et al. ('48) in order to obtain the advantages taught by Matsui et al. ('47) or Ikeda et al., motivated by a reasonable expectation of success.

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6. Claims 1, 2, 18, 20, 21, 25, 26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakoda et al. (USPN 6,277,491) or Imai et al. (JP 2002338725) independently in combination with either of JP 53109565, JP53127567, Matsui et al. (JP 60203647) or Ikeda et al. (JP 04057837), for reasons cited in the previous action.

Response to Arguments

7. Applicant's arguments filed 12/13/2006 have been fully considered but they are not persuasive.

8. Regarding the argument that Kitani "does not disclose the use of polyethylene glycol in the homogeneously-mixed organic solution", applicant is mistaken. Kitani makes it clear that a mixture of the polyethylene wax, ethylene glycol and the stearate metal salt may be used as the non-solvent for the expandable styrene particles.

Therefore, it remains reasonable that the moulded article from the coated expandable polystyrene particles Kitani would possess the presently claimed properties since the composition of Kitani's expandable polystyrene particles is essentially the same as the claimed composition and the USPTO does not have at its disposal the tools or facilities deemed necessary to make physical determinations of the sort. In any event, an otherwise old composition is not patentable regardless of any new or

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unexpected properties. *In re Fitzgerald et al*, 619 F.2d 67,205 USPQ 594 (CCPA 1980).

See MPEP § 2112 - § 2112.02.

Even if assuming that the prior art references do not meet the requirements of 35 U.S.C. 102, it would still have been obvious to one of ordinary skill in the art, at the time the invention was made, to arrive at the same inventive composition because the disclosure of the inventive subject matter appears within the generic disclosure of the prior art.

9. Regarding the argument that Matsui “further includes silicone oil and a lipophilic cationic surfactant, which are excluded from the claims as amended”, the examiner finds no such language in the claims. The addition of “consisting essentially of” does not exclude these components as applicant has not demonstrated that these components disrupt the “essential” invention properties of the claimed composition.

10. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it is well known in the art to incorporate both polyethylene wax and fatty acid metal salt into coating

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composition for expandable polystyrene particles, for the purpose of preventing blocking of the resin granules at the time of pre-foaming and reducing the cooling time at the time of foaming and moulding, such as taught by Matsui et al. ('47--see abstract) and to providing improved fusion among the expanded particles while having improved resistance to leakage in the moulded products, such as taught by Ikeda et al. (see abstract).

Further, the fact that applicant may have recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

11. Regarding the argument that none of JP '565, JP '567, Matsui '647 or Ikeda provide any suggestion or motivation to prepare the coating Sakoda without the fluorine-containing block copolymer, the examiner finds no language in the claims that would require such a modification of Sakoda. The addition of "consisting essentially of" does not exclude these components as applicant has not demonstrated that these components disrupt the "essential" invention properties of the claimed composition.

Again, the fact that applicant may have recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

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12. In response to applicant's argument that the examiner's conclusion of obviousness over Imai individually in combination with either of JP 53109565, JP53127567, Matsui et al. or Ikeda et al. is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Matsui et al. ('47--see abstract) teaches incorporating both polyethylene wax and fatty acid metal salt into coating composition for expandable polystyrene particles for the purpose of preventing blocking of the resin granules at the time of pre-foaming and reducing the cooling time at the time of foaming and moulding, Ikeda et al. (see abstract) teach incorporating both polyethylene wax and fatty acid metal salt into coating composition for expandable polystyrene particles to providing improved fusion among the expanded particles while having improved resistance to leakage in the moulded products, and each of JP 53109565, JP53127567 (see abstracts) teach incorporating polyethylene wax into coating composition for expandable polystyrene particles, in order to aid in the evaporation of the blowing agent during moulding. Thus, there is ample motivation to combine these references with Imai's particles.

The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for

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patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kelechi C. Egwim whose telephone number is (571) 272-1099. The examiner can normally be reached on M-T (7:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KELECHI C. EGWIM PH.D.
PRIMARY EXAMINER
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